

I CLAIM:

1 1. A protocol to serial link bridge comprising: an established protocol interface and
2 the protocol to serial link bridge further comprises; a means for programing the established
3 protocol interface to first mode of operation and a second mode of operation, the established
4 protocol interface includes a means for transferring established protocol cells between the
5 protocol to serial link bridge and the first device layers when in the first mode of operation
6 and for transferring the established protocol cells between the protocol to serial link bridge
7 and the second device layers when in the second mode of operation;

8 a serial interface;

9 a down bridge direction and an up bridge direction and in the up bridge direction the
10 protocol to serial link bridge includes;

11 a means for receiving a frame of a plurality of transport containers including a means
12 for checking an error code of at least a first portion of each transport container and a means
13 for detecting a marking in a predefined transport container of the frame of transport
14 containers;

15 a means for converting the transport container to the established protocol cell, the
16 means being operatively connected to the established protocol interface and to the means for
17 receiving;

18 a means for applying the established protocol cell to the established protocol
19 interface, the means for applying being operatively connected to the means for converting
20 and to the established protocol interface.

1 2. The protocol to serial link bridge according to claim 1, wherein the frame being
2 composed of N blocks of transport containers where N is a positive number with each block
3 including M transport containers where M is a positive number and each transport container
4 includes at least one control byte, and the means for receiving the transport containers
5 includes a means for sequentially receiving a first transport container of a first block through
6 a last transport container of a last block.

7 3. The protocol to serial link bridge according to claim 1 wherein each transport
8 container includes an error code generated over at least a first portion having a bit width
9 equal to the number of f bits in the at least first portion of each transport container and the
10 means for detecting a marking further comprises a means for establishing transport
11 container synchronization from the error code.

1 4. The protocol to serial link bridge according to claim 3 wherein the means for
2 establishing transport container synchronization from the error code further includes a means
3 for continually checking for a no error indication over a bit width equal to the bit width of
4 the at least the first portion.

1 5. The protocol to serial link bridge according to claim 4 wherein the means for
2 receiving includes a means for receiving a plurality of frames and wherein the error code is
3 a CRC polynomial code and each frame includes a synch transport container and the means
4 for receiving the plurality of frames further includes a means for establishing frame
5 synchronization.

1 6. The protocol to serial link bridge according to claim 5 wherein the error code in
2 the synch transport container includes a combination of the CRC polynomial code and a
3 coset of the CRC polynomial code and the means for establishing frame synchronization
4 includes a means for checking the error codes in each transport container for a no error
5 condition in the combination of the CRC polynomial code and the coset of the CRC
6 polynomial code.